

ABSTRACT

Data is to be estimated from a received plurality of data signals in a code division multiple access communication system. The data signals are transmitted in a shared spectrum at substantially a same time. A combined signal of the transmitted data signals are received over the shared spectrum and sampled. A channel response for the transmitted data signals is estimated. Data of the data signals is estimated using the samples and the estimated channel response. The data estimation uses a fourier transform based data estimating approach. An error in the data estimation introduced from a circulant approximation used in the fourier transform based approach is iteratively reduced.